

Computing – Year 5

Autumn 1

Computer Systems and Networks - Computing and Networks

- Digital Device is something that has a computer inside to make it work like a washing machine or mobile phone.
- Digital **Devices** process other things, other than switching on and off. Digital devices have inputs, processes, and outputs.
- **Input:** Data provided to a computer system, such as via a keyboard, mouse, microphone, camera or physical sensors.
- A **process** is when a computer follows a set of instructions using the data that has been input.
- **Outputs** The information produced by a computer system for its user; items on a screen, speakers, lights.
- **Connection.** A link between 2 or more things.
Computer Network: A group of two or more digital devices connected together.
- **Communication** When data is exchanged between two or more computing devices.
- **Collaboration** When more than one person works on a document or program from separate devices.
- **Technology** has to be used safely, respectfully and responsibly.

Autumn 2

Creating Media – Video Editing

- Digital Devices process other things, other than switching on and off. Digital devices have inputs, processes, and outputs.
- Input: Data provided to a computer system, such as via a keyboard, mouse, microphone, camera or physical sensors.
- Software is the programme or operating system that a computer uses.
- A video is the recording, reproducing, or broadcasting of moving visual images.
- Videos can be improved by editing. You can edit by using the tools in video editing software: split, trim and crop.

Spring 1

Data - Data and Information

- A database is an organised collection of structured information, or data that can be easily accessed, managed and modified.
- Technology can be used to sort data
- Grouping and then sorting data allows us to answer questions
- Collecting locating and organising data.
- Analysing examine (something) in detail to explain and interpret data and information.
- Evaluating is to judge or calculate the quality, importance, amount, or value of something.

Spring 2

Programming – Selection in Physical Computing

- Programming is when you give an algorithm to a digital device so it can complete its action.
- An **algorithm** is a precise set of ordered instructions which can be turned into code
- Algorithms need to be written in a special language called code so digital devices, can understand them.
- **Coding** is how we communicate with computers. Code tells a computer what actions to take.
- Bug: A mistake in the code.
- **Selection:** A decision or a question
- **Repetition** – A repeat in code, repeating a sequence of instructions a certain number of times.
- **Connection.** A link between 2 or more things.
- **Input:** Data provided to a computer system, such as via a keyboard, mouse, microphone, camera or physical sensors.
- A **process** is when a computer follows a set of instructions using the data that has been input.
- **Outputs** The information produced by a computer system for its user: items on a screen, speakers, lights.

Summer 1

Creating Media – Vector Drawing

- Information Technology helps us to do a job, communicate or for entertainment.
- **Presenting** is when you can use a sequence of multimedia formats, such as images, video, audio and text to demonstrate knowledge or skilled learned.
- **Vector drawings** are made using shapes that are layered on top of each other.
- Each element of a vector drawing is called an object
- **Resizing**; making your shape bigger and smaller
- **Rotating**; Turing your shapes around
- **Duplicate**; making the same image again.

Summer 2

Programming – Selection in Quizzes

- An **algorithm** is a precise set of ordered instructions which can be turned into code
- **Coding** is how we communicate with computers. Code tells a computer what actions to take.
- **Sequence**: steps carried out in order.
- **Conditions** are statements that need to be met for a set of actions to be carried out.
 - When a condition is met, it is referred to as 'true' and when it is not met it is referred to as 'false'.
- **Selection**: A decision or a question
 - **Selection** is used to control the flow of actions in algorithms and programs by checking whether a condition has been met.
- **Debugging** is checking the code in a computer program to ensure it works and changing it if it doesn't.